

IN THE SPECIFICATION

Please amend the specification as set forth below.

Page 1, before the first line of the specification please insert the following paragraph:

This application is a continuation application of U.S. Serial No. 09/623,040, filed August 25, 2000. This application is related to U.S. Serial No. 10/287,656, filed November 5, 2002.

Page 2, first full paragraph, lines 3-13, amend the paragraph as follows:

~~By the way, in~~ In the first conventional art, a configuration of a power supply for supplying power to the scanning electromagnets was not described in detail. However, one may consider a power supply for an electromagnet described in Japanese Published Unexamined Patent Application No. 8-88972 (hereinafter referred to as the "second conventional art") is used for the scanning electromagnets. In this power supply, a filter for removing a pulsating component from its output is provided at the output side of the power supply in

order to improve control accuracy of an exciting current flowing in the electromagnet.

Page 20, first full paragraph, lines 1-11, amend the paragraph as follows:

~~By the way, time~~ Time t is a time necessary for the exciting current of the scanning electromagnet 23 to be changed by I , that is, a time necessary for the irradiation area to be changed over, a short time as small as possible should be set in order to shorten the treatment time. However, if too short time is set, the voltage command value V_a becomes too large, accordingly loads of the power supply unit 27a for generating the voltage and the scanning electromagnet 23 where the voltage is applied inevitably increase. Therefore, the operator sets an appropriate value in consideration of a balance between these loads and the treatment time.

Pages 30-31, the paragraph bridging these pages from page 30, line 20, to page 31, line 5, amend the paragraph as follows:

~~By the way, if~~ If voltage detectors for detecting the voltage applied to the scanning electromagnets 23 and 24 and current detectors for detecting exciting currents flowing in the scanning electromagnets 23 and 24 are added to the present embodiment and a display unit for displaying waveforms of currents and voltages detected by the voltage detector and the current detector is employed, it can be checked whether the voltage applied to the scanning electromagnets 23 and 24 as well as the exciting current flowing in the scanning electromagnets 23 and 24 are in desired waveforms can be verified.

Page 34, second full paragraph, lines 4-11, amend the paragraph as follows:

~~By the way, in~~ In the Embodiments 1 and 2, the voltage values outputted by the power supply unit 27a are controlled by the AC-DC converter 272a. However, the output voltage value of the power supply unit 27a may be controlled by PWM controlling the inverter 273a. In such a case, control units whose configuration are similar to those of the control unit

275 and the PWG control unit 276 of the power supply unit 27b may be added to the power supply unit 27a.

Pages 11-12, the paragraph bridging these pages from page 11, line 21, to page 12, line 9, amend the paragraph as follows:

The control device 3 outputs the current command values to the power supplies of the deflecting electromagnet 211 and the quadruple electromagnet 22, and also outputs the position data of the irradiation areas A11, A12, ... And the beam energy value to the scanning electromagnet control devices 25 and 26. The scanning electromagnet control devices 25 and 26 calculate the exciting current values for respective irradiation areas A11, A12... that are necessary for scanning electromagnets 23 and 24 to apply the beam to respective irradiation areas A11, A12, ... based on the entered position data of the irradiation areas A11, A12, ... and the beam energy value. Furthermore, the scanning electromagnet control devices 25 and 26 calculate voltage values necessary for the scanning electromagnets 23 and 24 to apply the beam to respective irradiation areas A11,

A12, ... based on the exciting currents. Among the voltage values obtained, to start with, the voltage corresponding to A91 (a first irradiation area to be irradiated in the layered area L9) is outputted by the scanning electromagnet control devices 25 and 26 to the scanning electromagnet power supplies 27 and 28 as voltage command values. The scanning electromagnet power supplies 27 and 28 apply the voltages to the scanning electromagnets 23 and 24 based on the given voltage command values. In the scanning electromagnetic 23 and 24 flow the exciting currents according to the applied voltages, and the magnetic fields according to the exciting currents are generated. Then, by means of these magnetic fields, the scanning electromagnet 23 deflects the beam in an X-direction, and the scanning electromagnet 24 deflects the beam in an Y-direction, respectively. ~~By the way, details~~ Details of the scanning electromagnet control devices 25 and 26 and the scanning electromagnet power supplies 27 and 28 will be described later.